

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Previously presented) A method of distributing virtual circuit identifiers associated with gateways in a network, comprising:
 - receiving, at a first router/switch, packets comprising a plurality of first virtual circuit identifiers associated with gateways in the network;
 - determining if any of the gateways are connected to the first router/switch;
 - assigning, at the first router/switch, second virtual circuit identifiers to connected gateways; and
 - initiating the transmission of a message from the first router/switch to the connected gateways informing the connected gateways of the plurality of first virtual circuit identifiers.
2. (Previously presented) The method of claim 1, further comprising:
 - initiating transmission of a packet to neighboring routers/switches informing the routers/switches of the assigned second virtual circuit identifiers and the plurality of first virtual circuit identifiers.
3. (Previously presented) The method of claim 1, further comprising:
 - updating at least one virtual circuit table stored at the first router/switch using the first virtual circuit identifiers.
4. (Previously presented) A network device, comprising:
 - at least one network interface configured to:
 - receive packets flooded from other network devices in a network comprising a plurality of first virtual circuit identifiers associated with gateways in the network; and
 - at least one processor configured to:
 - determine if any gateways are connected to the network device,

assign second virtual circuit identifiers to connected gateways, and
initiate the transmission of a message to the connected gateways informing the
connected gateways of the plurality of first virtual circuit identifiers.

5. (Original) The network device of claim 4, wherein the at least one processor is
further configured to:

initiate transmission of a packet to neighboring nodes informing the nodes of the
assigned second virtual circuit identifiers and the plurality of first virtual circuit identifiers.

6. (Original) The network device of claim 4, further comprising:
a memory configured to store at least one virtual circuit table; and
where the processor is further configured to:
update the at least one virtual circuit table using the first virtual circuit
identifiers.

7. (Previously presented) A computer-readable medium containing instructions
for controlling at least one processor to perform a method of distributing virtual circuit identifiers
associated with gateways in a network, the method comprising:

receiving, at a first router/switch, packets comprising a plurality of first virtual
circuit identifiers associated with gateways in the network;
determining if any of the gateways are connected to the first router/switch;
assigning, at the first router/switch, second virtual circuit identifiers to connected
gateways; and
initiating the transmission of a message from the router/switch to the connected
gateways informing the connected gateways of the plurality of first virtual circuit identifiers.

8. (Previously presented) The computer-readable medium of claim 7, the method
further comprising:

initiating transmission of a packet to neighboring routers/switches informing the
routers/switches of the assigned second virtual circuit identifiers and the plurality of first virtual
circuit identifiers.

9. (Previously presented) The computer-readable medium of claim 7, the method further comprising:

updating at least one virtual circuit table stored in the first router/switch using the first virtual circuit identifiers.

10. (Previously presented) A network comprising:

a plurality of gateways; and

a router connected to at least one of the plurality of gateways and configured to:

receive packets, flooded from other routers in the network, comprising a plurality of first virtual circuit identifiers associated with the plurality of gateways in the network, assign second virtual circuit identifiers to the at least one of the plurality of gateways, and

initiate the transmission of a message to the at least one of the plurality of gateways informing the at least one gateway of the plurality of first virtual circuit identifiers.

11. (Original) The network of claim 10, wherein the router is further configured to:

initiate transmission of a packet to neighboring nodes in the network informing the nodes of the assigned second virtual circuit identifiers and the plurality of first virtual circuit identifiers.

12. (Original) The network of claim 10, wherein the router is further configured to:

update at least one virtual circuit table stored in the router using the first virtual circuit identifiers.

13. (Original) A method of forwarding packets received at a first gateway in a network, comprising:

receiving a message at the first gateway, the message comprising a plurality of virtual circuit identifiers associated with other gateways in the network;

receiving packets for transmission from the first gateway to a destination address associated with a second gateway; and

sending the received packets towards the second gateway using one of the received plurality of virtual circuit identifiers.

14. (Original) The method of claim 13, further comprising:

updating at least one virtual circuit table stored at the first gateway using the plurality of virtual circuit identifiers.

15. (Original) A computer-readable medium containing instructions for controlling at least one processor to perform a method of forwarding packets received at a first gateway in a network, the method comprising:

receiving a message at the first gateway, the message comprising a plurality of virtual circuit identifiers associated with other gateways in the network;

receiving packets for transmission from the first gateway to a destination address associated with a second gateway; and

sending the received packets towards the second gateway using one of the received plurality of virtual circuit identifiers.

16. (Original) The computer-readable medium of claim 15, the method further comprising:

updating at least one virtual circuit table stored at the first gateway using the plurality of virtual circuit identifiers.

17. (Original) A gateway comprising:

an interface configured to:

receive a message comprising a plurality of virtual circuit identifiers

associated with other gateways in a network, receive a packet intended for transmission from the gateway to a destination address associated with a second gateway in the network; and

at least one processor configured to:
initiate transmission of the received packet towards the second gateway using one of the plurality of received virtual circuit identifiers.

18. (Original) The gateway of claim 17, wherein the at least one processor is further configured to:

update at least one virtual circuit table stored at the gateway using the plurality of virtual circuit identifiers.

19. (Original) A system for forwarding packets received at a first gateway in a network, the system comprising:

means for receiving a message at the first gateway, the message comprising a plurality of virtual circuit identifiers associated with other gateways in the network;

means for receiving packets for transmission from the first gateway to a destination address associated with a second gateway; and

means for sending the received packets towards the second gateway using one of the received plurality of virtual circuit identifiers.

20. (Previously presented) The method of claim 1, wherein the packets comprising a plurality of first virtual circuit identifiers associated with gateways in the network are flooded from other routers/switches in the network.